

2 0 1 3

BIO-ZOOLOGY

(Theory)

Full Marks : 35

Time : 1½ hours

General Instructions :

- (i) Write all the answers in the Answer-Script.
- (ii) Attempt all parts of a Group serially in one place.
- (iii) *All* questions are compulsory.
- (iv) The figures in the margin indicate full marks for the questions.
- (v) This question paper consists of 6 (six) Groups—A, B, C, D, E and F.

Group—A consists of 4 questions (multiple-choice type).
Question Nos. **1** to **4** are of $\frac{1}{2}$ mark each.

Group—B consists of 4 questions (very short-answer type).
Question Nos. **5** to **8** are of 1 mark each and to be answered in 1 word or 1 sentence each.

Group—C consists of 4 questions (short-answer type—I).
Question Nos. **9** to **12** are of 2 marks each with one alternative from the same Group to be answered in 20–30 words each.

(2)

Group—D consists of 4 questions (short-answer type—II). Question Nos. **13** to **16** are of 3 marks each with one alternative to be answered in 30–40 words each.

Group—E consists of 1 question (long-answer type—I). Question No. **17** is of 4 marks with an alternative to be answered in 50–70 words.

Group—F consists of 1 question (long-answer type—II). Question No. **18** is of 5 marks with an alternative to be answered in 70–80 words.

GROUP—A

Choose and write the correct answer of the following :

$\frac{1}{2} \times 4 = 2$

1. The first phase of embryonic development is

(a) cleavage

(b) blastulation

(c) gastrulation

(d) placentation

(3)

2. When a gene pair in an organism contains two identical alleles, the organism is considered to be

- (a) phenotypic
- (b) genotypic
- (c) homozygous
- (d) heterozygous

3. Amoebic dysentery is a disease caused by

- (a) *Plasmodium vivax*
- (b) *Entamoeba histolytica*
- (c) *Ascaris lumbricoides*
- (d) *Wuchereria bancrofti*

4. Manas Wildlife Sanctuary is located in

- (a) Meghalaya
- (b) Assam
- (c) West Bengal
- (d) Rajasthan

(4)

GROUP—B

5. Give a term for the change of spermatid into a sperm. 1
6. What are pathogens? 1
7. What is genotype? 1
8. Define immunity. 1

GROUP—C

9. Where are Sertoli cells found? What is their function? 1+1=2
10. Name any two sex-linked disorders of human beings. 2
11. What are vestigial organs? Name two vestigial organs of man. $1+(\frac{1}{2}\times 2)=2$
12. *Either*
- (a) Draw a labelled diagram of TS of ovary of human being. 2
- Or*
- (b) Draw a labelled diagram of TS of testis of human being.

(5)

GROUP—D

13. What is biodiversity? List two causes for the loss of biodiversity. 1+(1×2)=3
14. Explain the sex determination in human beings. 3
15. *Either*
- (a) Differentiate between carcinoma and sarcoma. 3
- Or*
- (b) Differentiate between humoral immune system and cell-mediated immune system. 3
16. What is apiculture? Mention the products obtained from apiculture. 1+2=3

GROUP—E

17. *Either*
- (a) What is DNA fingerprinting? Write a note on its applications. 1+3=4
- Or*
- (b) A man with AB blood group marries a woman with O blood group. Show the genotypes and phenotypes of their progeny. 4

(6)

GROUP—F

18.

Either

- (a) Where does oogenesis occur in human being?
Describe the different phases of oogenesis with
the help of a diagram. 1+3+1=5

Or

- (b) What is global warming? Explain the possible
effects of global warming. 1+4=5
